staphylococci, which have lost a great portion of their virulence toward the leucocytes, have entirely preserved their reproductivity. The general conclusions are: That we must recognize three distinct properties in each pathogenic microbe: Its virulence; its reproductivity; its tenacity of life. 2. The efficacy of iodoform against the staphylococcus, which has been thoroughly established by the clinicians, is due to its faculty of increasing the energy of the leucocytes and of diminishing the virulence of the staphylococcus. We find here the explanation of the apparent contradiction between the observations of the clinic and of the laboratory.—*Bulletin général de Thérapeutique*, 1893, 36e livr., p. 241.

THE ANTISEPTIC POWER OF ICHTHYOL.

DR. RUDOLF ABEL, from his careful experiments in the laboratory, has reached the following conclusions: 1. The ichthyol preparations (ammonium and sodium) in weak solutions and in a short time destroy the pyogenic and erysipelas streptococci. The action of various commercial preparations is practically identical. Ichthyol is used with success in the suppuration from these cocci. 2. The staphylococcus aureus and albus, the bacillus pyocyaneus, the bacillus of typhoid, ozæna, and anthrax, the spirillum of Asiatic cholera, show more or less resistance to ichthyol, in that when pure it must act upon them by the hour in order to destroy these organisms in cultures. 3. The diphtheria bacillus in fresh colonies is easily destroyed by weak ichthyol solutions, while mature ones are acted upon with difficulty. Therefore it is useful in diphtheria only in prophylaxis. 4. Ichthyol has rendered good service in the treatment of typhus and ozæna, although it can only with difficulty make harmless these infections. 5. It is recommended that it should be preserved only in substance or in a 50 per cent. solution; weaker solutions may be culture mediums for micro-organisms, as the staphylococcus aureus. Weak solutions should be sterilized by heat, which has no influence upon its properties.—*Centralblatt für Bakteriologie und Parasitenkunde*, 1893, No. 13, S. 413.

THE INFLUENCE OF CHLOROFORM UPON THE RESPIRATION AND CIRCULATION.

DRS. H. A. HARE and E. Q. THORNTON, after an elaborate and painstaking series of experiments, believe chloroform to be safe for the majority of cases, provided it be given by one who is skilled in its use, and who not only knows how to give it, but to detect signs of danger. It is not so safe as ether at any time, other things being equal, and never so safe in the hands of a tyro. The respiration should be watched, because so soon as enough chloroform is used to endanger the circulation the respiration will show some abnormality. Death in the healthy animal is always due to respiratory failure, accompanied by circulatory depression which may be severe enough to cause death, even if artificial respiration be skilfully used. Chloroform may be chosen in hot climates, when a large number of persons are to be rapidly anæsthetized; in Bright's disease, in aneurism, or great atheroma of blood-vessels; in children or adults who already have bronchitis; to persons who struggle violently. The safest method of administration is by Lawrie's or

Esmarch's inhaler, because these provide for circulation of air, and do not distract the attention of the anæsthetiser from the respiratory movements by complicated apparatus.—*Therapeutic Gazette*, 1893, No. 10, p. 672.

The Action and Uses of Pental.

Dr. David Cerna summarizes his conclusions as follows: 1. Pental possesses general anæsthetic properties. 2. The local anæsthetic effects produced by the drug are feeble. 3. Pental anæsthesia is rapidly established, but it also quickly disappears. It is chiefly of centric origin. 4. Pental depresses the circulation to a dangerous degree, causing a fall of the arterial pressure, and of the rate of the pulse, the latter phenomenon being followed by an increase even above the normal standard. 5. The lowering of the pressure is due to an action upon the heart and to a stimulation of the peripheral cardio-inhibitory centres. The vasomotor system is apparently not affected by the drug. 6. Under pental the pulse-rate is decreased at first, due similarly to a direct cardiac influence and to excitation of the cardio-inhibitory centres peripherally; the secondary increase to paralysis of the latter; and the final diminution to an action upon the heart. 7. The respiratory rate is increased through a direct action of the agent upon the respiratory centres. The respiration is afterward depressed by an influence exercised upon the same. The drug sometimes causes the Cheyne-Stokes type of respiratory movements. 8. Pental produces death mainly by cardiac paralysis. Sometimes, however, the heart and respiration stop simultaneously; at others a fatal issue is the result of respiratory failure. 9. The drug in poisonous amounts diminishes to a certain extent the irritability of the cardiac muscle. 10. Pental dilates the pupil, this phenomenon being probably of centric origin. 11. The narcosis of pental is not unattended by unpleasant after-effects, the action of these being principally that of excitement. 12. Pental cannot be considered as a safe or even as an efficient general anæsthetic, and is certainly inferior to ether and chloroform.—*American Medico-Surgical Bulletin*, 1893, No. 10, p. 918.

Limitations of the Use of Nitro-glycerin in Chronic Nephritis.

Dr. D. D. Stewart states that in his opinion, when it is desired to employ this drug over a considerable period of time for its effects on blood-pressure, the best rule of administration is to so proportion the dose that the intervals are comparatively short—never less than four times daily—and the amount, though sufficient to produce some subjective or objective effect, never more than that just necessary to cause the *slightest* feeling of fulness in the head or to slightly quicken the pulse. When a rather rapid increase seems necessary to maintain a constant effect, an equally important point is to temporarily discontinue the drug for two or more days, at intervals of two or three weeks. On its resumption a much smaller initial dose will be required to produce physiological effects than that last taken.—*The Therapeutic Gazette*, 1893, No. 9, p. 604.